

Application No.: 09/722923  
Group Art Unit: 2178

Attorney Docket No.: SMQ-114RCE/P5635

### AMENDMENTS TO THE CLAIMS

Please amend the presently pending claims as follows:

1. (currently amended) A method for maintaining a database of objects accessible by applications written in a plurality of programming languages comprising:  
requesting to store an instance of an object implemented in a first programming language into a database;  
providing at least one structured document representing the instance of the object including attributes and attribute values defined for a class; ~~and~~  
adding content of the structured document representing the object into the database, ~~wherein the database storing stores multiple~~ a plurality of structured documents representing multiple a plurality of objects originally instantiated in at least two different programming languages, and  
sharing the at least one structured documents representing the instance of the object implemented in a first programming language with an application written in a second programming language.
2. (original) The method of claim 1, further comprising:  
receiving multiple structured documents representing instances of objects defined for the class, wherein the objects represented in at least two different received structured documents were generated in different programming languages.
3. (original) The method of claim 2, wherein application programs implemented in different programming languages can share objects represented as structured documents in the database.
4. (original) The method of claim 1, wherein the database comprises a structured document, and wherein adding the content of each structured document representing one object comprises inserting the content of the structured document representing the object into the structured document implementing the database.

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5. (original) The method of claim 4, wherein the database structured document and the structured documents representing the objects are in a same file format.

6. (original) The method of claim 5, wherein the same file format comprises an extensible markup language (XML) document format.

7. (original) The method of claim 1, wherein the structured document comprises an extensible markup language (XML) document.

8. (original) The method of claim 1, wherein all the objects represented as structured document content in the database are instantiated from a same class.

9. (Currently amended) A method for accessing a database of objects originally instantiated in at least two different programming languages, comprising:

~~requesting a first application of said plurality to obtain in a programming language an instance of at least one object from a database storing at least one structured document representing one or more objects;~~

~~obtaining from the database the generating an instance of the at least one object including attributes and attribute values defined for a class, the object originally instantiated in a first language;~~

generating a structured document representing the at least one object and including a representation of the attributes and attribute values in the object; and

~~providing the transferring each structured document to the database to maintain, the database storing at least one other structured document representing an object originally instantiated in a second programming language.~~

10. (currently amended) The method of claim 9, further comprising:

receiving the structured document from the database representing attributes and attribute values for the at least one object originally instantiated in a first programming language; and

generating an object in a second programming language that includes the attributes and attribute values represented in the structured document, wherein the generated object

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embodies the object represented by the received structured document, ~~and the generated object is implemented in the programming language.~~

11. (original) The method of claim 9, wherein generating the at least one object further comprises:

- (i) generating an instance of a first object including attributes and attribute values defined for the class in a first programming language; and
- (ii) generating an instance of a second object including attributes and attribute values defined for the class in a second programming language;

wherein generating one structured document for each generated object further comprises:

- (i) generating a first structured document representing the first object; and
- (ii) generating a second structured document representing the second object.

12. (original) The method of claim 11, wherein application programs implemented in the first and second programming languages are capable of sharing objects represented as structured documents in the database.

13. (original) The method of claim 9, wherein the database comprises a structured document, and wherein adding the content of the structured documents representing the objects comprises inserting the content into the database structured document.

14. (original) The method of claim 13, wherein the database structured document and the structured documents representing the objects are in a same file format.

15. (original) The method of claim 14, wherein the same file format comprises an extensible markup language (XML) document format.

16. (original) The method of claim 9, wherein the structured document comprises an extensible markup language (XML) document.

17. (original) The method of claim 9, wherein all the objects represented as structured document content in the database are instantiated from a same class.

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18. (Currently amended) A system for maintaining a database of objects, comprising:  
~~means for requesting to store an instance of an object implemented in a programming language into a database;~~  
means for ~~providing~~ receiving at least one structured document representing the ~~an~~ instance of ~~the an~~ object including attributes and attribute values defined for a class, the object originally instantiated in a first programming language; and  
means for adding content of the structured document representing the object into the database, wherein the database stores ~~multiple a plurality of~~ structured documents representing multiple objects originally instantiated in at least two programming languages.

19. (original) The system of claim 18, further comprising:  
means for receiving multiple structured documents representing instances of objects defined for the class, wherein the objects represented in at least two different received structured documents were generated in different programming languages.

20. (original) The system of claim 19, wherein application programs implemented in different programming languages can share objects represented as structured documents in the database.

21. (original) The system of claim 18, wherein the database comprises a structured document, and wherein adding the content of each structured document representing one object comprises inserting the content of the structured document representing the object into the structured document implementing the database.

22. (original) The system of claim 21, wherein the database structured document and the structured documents representing the objects are in a same file format.

23. (original) The system of claim 22, wherein the same file format comprises an extensible markup language (XML) document format.

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24. (original) The system of claim 18, wherein the structured document comprises an extensible markup language (XML) document.

25. (original) The system of claim 18, wherein all the objects represented as structured document content in the database are instantiated from a same class.

26. (currently amended) A system for accessing a database of objects by a plurality of applications, comprising:

~~means for requesting to obtain in a programming language an instance of at least one object from a database storing at least one structured document representing one or more objects;~~

~~means for obtaining from the database generating an the instance of the at least one object including attributes and attribute values defined for a class, the at least one object originally instantiated in a first programming language;~~

~~means for generating a structured document representing the at least one object and including a representation of the attributes and attribute values in the object; and~~

~~means for providing the transferring each structured document to the database to maintain the database including a plurality of structured documents representing objects originally instantiated in at least the first and a second language.~~

27. (currently amended) The system of claim 26, further comprising:

~~means for receiving a the structured document from the database representing attributes and attribute values for at the least one object; and~~

~~means for generating an object including the attributes and attribute values represented in the structured document, wherein the generated object embodies the object represented by the received structured document, and the generated object is implemented in the first or second programming language.~~

28. (previously presented) The system of claim 26, wherein the means for generating the at least one object further performs:

(i) generating an instance of a first object including attributes and attribute values defined for the class in a first programming language, and

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(ii) generating an instance of a second object including attributes and attribute values defined for the class in a second programming language;

wherein the means for generating one structured document for each generated object further performs:

- (i) generating a first structured document representing the first object; and
- (ii) generating a second structured document representing the second object.

29. (original) The system of claim 28, wherein application programs implemented in the first and second programming languages are capable of sharing objects represented as structured documents in the database.

30. (original) The system of claim 26, wherein the database comprises a structured document, and wherein adding the content of the structured documents representing the objects comprises inserting the content into the database structured document.

31. (original) The system of claim 30, wherein the database structured document and the structured documents representing the objects are in a same file format.

32. (original) The system of claim 31, wherein the same file format comprises an extensible markup language (XML) document format.

33. (original) The system of claim 26, wherein the structured document comprises an extensible markup language (XML) document.

34. (original) The system of claim 26, wherein all the objects represented as structured document content in the database are instantiated from a same class.

35. (Currently amended) An article of manufacture for maintaining a database of objects wherein the article of manufacture comprises code implemented in a computer readable medium capable of causing a processor to perform:

requesting to store an instance of an object implemented in a programming language into a database;

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providing/receiving at least one structured document representing the instance of the an object including attributes and attribute values defined for a class, the object originally instantiated in a first programming language; and

adding content of the structured document representing the object into the database, wherein the database stores multiple structured documents representing multiple objects, the documents stored in the database representing objects originally instantiated in at least the first programming language and a second programming language.

36. (original) The article of manufacture of claim 35, wherein the code is further capable of causing the processor to perform:

receiving multiple structured documents representing instances of objects defined for the class, wherein the objects represented in at least two different received structured documents were generated in different programming languages.

37. (original) The article of manufacture of claim 36, wherein application programs implemented in different programming languages can share objects represented as structured documents in the database.

38. (original) The article of manufacture of claim 35, wherein the database comprises a structured document, and wherein adding the content of each structured document representing one object comprises inserting the content of the structured document representing the object into the structured document implementing the database.

39. (original) The article of manufacture of claim 38, wherein the database structured document and the structured documents representing the objects are in a same file format.

40. (original) The article of manufacture of claim 39, wherein the same file format comprises an extensible markup language (XML) document format.

41. (original) The article of manufacture of claim 35, wherein the structured document comprises an extensible markup language (XML) document.

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42. (original) The article of manufacture of claim 35, wherein all the objects represented as structured document content in the database are instantiated from a same class.

43. (Currently amended) An article of manufacture for accessing a database of objects by a plurality of applications, the plurality of applications written in at least two different programming languages, wherein the article of manufacture comprises code implemented in a computer readable medium capable of causing a processor to perform:

~~requesting by a first application of said plurality to obtain an instance in a programming language of at least one object from a database storing at least one structured document representing one or more objects;~~

~~obtaining from the database the~~generating an instance of the at least one object including attributes and attribute values defined for a class, the at least one object originally instantiated in a first programming language;

~~for each generated document, generating a structured document representing the at least one object and including a representation of the attributes and attribute values in the object; and~~

~~providing the~~transferring each structured document to the database to maintain, the database including structured documents representing objects instantiated in at least first and a second programming language.

44. (previously presented) The article of manufacture of claim 43, wherein the code is further capable of causing the processor to perform:

~~receiving the structured document from the database representing attributes and attribute values for the least one object; and~~

~~generating an object including the attributes and attribute values represented in the structured document, wherein the generated object embodies the object represented by the received structured document, and the generated object is implemented in the programming language.~~

45. (previously presented) The article of manufacture of claim 43, wherein generating the at least one object further comprises:

(i) generating an instance of a first object including attributes and attribute values defined for the class in a first programming language; and



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- (ii) generating an instance of a second object including attributes and attribute values defined for the class in a second programming language;  
wherein generating one structured document for each generated object further comprises:  
(i) generating a first structured document representing the first object; and  
(ii) generating a second structured document representing the second object.

46. (previously presented) The article of manufacture of claim 45, wherein application programs implemented in the first and second programming languages are capable of sharing objects represented as structured documents in the database.

47. (original) The article of manufacture of claim 43, wherein the database comprises a structured document, and wherein adding the content of the structured documents representing the objects comprises inserting the content into the database structured document.

48. (original) The article of manufacture of claim 47, wherein the database structured document and the structured documents representing the objects are in a same file format.

49. (original) The article of manufacture of claim 48, wherein the same file format comprises an extensible markup language (XML) document format.

50. (original) The article of manufacture of claim 43, wherein the structured document comprises an extensible markup language (XML) document.

51. (original) The article of manufacture of claim 43, wherein all the objects represented as structured document content in the database are instantiated from a same class.

52. (Currently Amended) A computer readable medium including a computer database of objects, comprising:

at least one structured document representing an instance of an object including attributes and attribute values defined for a class, the object originally instantiated in a first programming language, wherein the database stores multiple structured documents representing multiple objects, the multiple objects originally instantiated in at least the first programming language and

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a second programming language, wherein the instance of the object is implemented in a programming language; and

a database interface to receive a request to store the instance of the object to the database and to store content of the structured document representing the instance of the object into the database.

53. (original) The computer readable medium of claim 52, wherein the database stores multiple structured documents representing instances of objects defined for the class, and wherein the objects represented in at least two different structured documents stored in the database were generated in different programming languages.

54. (original) The computer readable medium of claim 53, wherein application programs implemented in different programming languages can share objects represented as structured documents in the database.

55. (original) The computer readable medium of claim 52, wherein the database comprises a structured document, and wherein structured documents representing objects are added to the database by inserting the content of the structured document representing the object into the structured document implementing the database.

56. (original) The computer readable medium of claim 55, wherein the database structured document and the structured documents representing the objects are in a same file format.

57. (original) The computer readable medium of claim 56, wherein the same file format comprises an extensible markup language (XML) document format.

58. (original) The computer readable medium of claim 52, wherein the structured document comprises an extensible markup language (XML) document.

59. (original) The computer readable medium of claim 52, wherein all the objects represented as structured document content in the database are instantiated from a same class.